Dyes and Pigments **13** (1990) 325–327

CONTENTS OF VOLUME 13

Number 1

Binary Cyclotetraphosphates $Zn_{2-x}Ca_xP_4O_{12}$ as New Special Pigments . . 1
M. TROJAN (Czechoslovakia)

Photophysical Characteristics of Some 2-Styrylindolium Dyes 11
ST. METSOV, D. SIMOV, ST. STOYANOV & P. NIKOLOV (Bulgaria)

Novel Oxidative Dye Couplers 21
KEITH C. BROWN, JAMES S. ANDERSON & JAMES E. KIJEK (USA)

Synthesis and Study of 6-Arylazo Coumarin Derivatives 29
R. RAJAGOPAL & S. SESHADRI (India)

Flash Photolysis Studies of a Sulphonated Bis-styryl Biphenyl Fluorescent Dye . 45
K. J. SMIT & K. P. GHIGGINO (Australia)

An Approach to the Design of Nonmutagenic Azo Dyes: Analogs of the Mutagen CI Direct Black 17 55
HAROLD S. FREEMAN, JAMES F. ESANCY &
LARRY D. CLAXTON (USA)

NMR Investigation of Azo Disperse Dyes 71
PIERO SAVARINO, GUIDO VISCARDI, ERMANNO BARNI,
ROSARINA CARPIGNANO (Italy) & LEV A. FEDOROV (USSR)

Number 2

The Syntheses of Some Phthalocyanine Intermediates and Pigments . . . 81
LEMI TÜRKER & LEVENT OKER (Turkey)

Azo Disperse Dyes Derived from 3-Amino-7-nitro-2*H*-1,2-benzothiazine 1,1-Dioxide 93
R. RAJAGOPAL & S. SESHADRI (India)

Tautomerism (Hydroxyazo versus Ketohydrazone Form) of [2.2.2] Cyclophane-1,2-dione Monoarylhydrazones: an ^{1}H-NMR Study 107
TAIZO HATTA, SHUNTARO MATAKA & MASASHI TASHIRO
(Japan)

Fluorescence Spectra Characteristics of α,ω-Di-1- and 9-Anthrylpoly-ynes . . 117
SHUZO AKIYAMA, KENICHIRO NAKASHIMA,
SHIN'ICHI NAKATSUJI & MASAZUMI NAKAGAWA (Japan)

Dyes and Pigments (13) (1990)—© 1990 Elsevier Science Publishers Ltd, England. Printed in Great Britain

1,4-Bis(arylamino)-5-nitro-(and 5-amino-)-8-hydroxyanthraquinones: Bluish-Green Dyes for Synthetic Polymer Fibres 123
A. T. PETERS (UK) & Y. C. CHAO (Taiwan)

Synthesis, Visible Absorption, Photosensitisation and Antimicrobial Activity of Some Butadienochromophoric Chain-Substituted Asymmetric Cyanines . . 135
B. N. JHA, R. K. JHA, D. KUMARI JHA & S. N. JHA (India)

Thermal Investigation of Sulphonylazide Dyes 155
ILYANA KARAMANCHEVA, ORLYN ATANASSOV & ALEXANDER DRAGANOV (Bulgaria)

Number 3

Azo Acid Dyes Derived from 3-Amino-7-Nitro-2*H*-1,2-benzothiazine-1,1-dioxide 161
R. RAJAGOPAL & S. SESHADRI (India)

Synthesis of Fluorescent 2,3-Fused Coumarin Derivatives 167
R. RAJAGOPAL, V. U. SHENOY, S. PADMANABHAN, S. SEQUERIA & S. SESHADRI (India)

Synthesis of a Pink–Violet Zirconium Silicate Pigment from Zircon Mineral . 177
M. TROJAN (Czechoslovakia)

Ring-Stackingwechselwirkungen in Assoziaten aus *o,o'*-Dihydroxyazofarbstoffen der Eriochromreihe und Kationischen Tensiden 187
H.-R. SAGASTER & G. RÖBISCH (GDR)

Synthesis of Some β- and γ-Substituted Azotrimethine Cyanide Dyes . . . 197
A. I. M. KORAIEM, Z. H. KHALIL & R. M. ABU EL-HAMED (Egypt)

The Dyeing Properties of Grafted Polyamide Fibres 205
A. BENDAK, A. KANTOUCH, S. E. SHALABY & A. M. RAMADAN (Egypt)

Spectrophotometric Determination of Ionization and Isomerization Constants of Rose Bengal, Eosin Y and Some Derivatives 219
F. AMAT-GUERRI, M. M. C. LÓPEZ-GONZÁLEZ, R. SASTRE & the late R. MARTÍNEZ-UTRILLA (Spain)

Synthesis and Properties of Aminoarylsulphonanilide-3',5'-dicarboxylic Acids . 233
KAZMIERZ BLUS & JAN KRASKA (Poland)

Number 4

Synthesis of 5-Hetarylpyrazolo [3,4-*b*]pyrazines and their Use as Disperse Dyes for Polyester Fibres 241
D. W. RANGNEKAR & S. V. DHAMNASKAR (India)

The Role of Organic Molecules in Colour Hard Copy 251
PETER GREGORY (UK)

Synthesis and Electronic Spectra of Some Bis-heterocyclic Methine Cyanine Dyes 269
A. I. M. KORAIEM, KH. M. HASSAN & R. M. ABD EL ALL (Egypt)

Synthesis of Yellow Pigments from Zircon Mineral 281
M. TROJAN (Czechoslovakia)

Synthesis and Spectra of Some Asymmetric Trimethine Cyanine Dyes . . 289
A. I. M. KORAIEM, Z. H. KHALIL & R. M. ABU EL-HAMD (Egypt)

Polycyclic Compounds Part VI. Structural Features of C.I. Disperse Yellow 232 301
N. R. AYYANGAR, K. V. SRINIVASAN & THOMAS DANIEL (India)

Synthesis of Blue–Violet and Brown–Green Zirconium Silicate Pigments from Zircon Mineral 311
M. TROJAN (Czechoslovakia)